Work Order ID 62840

Page 1

Friday, October 08, 2010 2:55:00 PM

Item II	D:
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C D205-634-041

Accept



Setup Start



Revision ID:

Item Name:

Replacement Skidtube

Start Date:

10/8/2010

Start Qty: 1.00

Req'd Qty: 1.00 **Required Date:** 10/27/2010



Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date: 16-10- 8 Tooling:

Date:

Run

Start

Stop

Stop



QC:

Revision Nbr

Date:

SPC (Y/N):

Date:

Tool # Plan

Accept

Reject

Insp.

Sequence ID/ Work Center ID **Draw Nbr**

Operation Description Set Up/

0.00

Run Hours

Tool ID

Qty Code

Reject Qty

Stamp Number

D2580

Rev D

100

DOCUMENT CONTROL

Memo

0.00

Document Control

Photocopy D205-634 bluefile & type labels per PPP D205-634-041 CHG002

110

CNC Bend I

CNC Delta 100 Bender

0.00

BENDING MACHINE - SKIDTUBES

Memo

0.00

1-Bend as per program D2580.C on CNC Bender and Folio 16

2-Cut tubes as per Dwg. D2580

3- scribe batch# in aft end of tube

10-10-19

Dart Aerospace Ltd

W/O:			W	ORK ORDER CHANG	ES			, , , ,	
DATE	STEP	PROCEDURE CHANGE				Date Q	Approval Chief Eng / Prod Mgr		
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Work Order ID 62840

Required Date: 10/27/2010

Page 2

Friday, October 08, 2010 2:55:00 PM

Item ID:

D205-634-041

Accept



Date:

Tool # Plan

Code

Setup Start



Revision ID:

Item Name:

Replacement Skidtube

Start Date:

10/8/2010

Start Qty: 1.00

Req'd Qty: 1.00



Cust Item ID:

Customer:

Tool ID

Reference:

Approvals:

Process Plan:

Operation

Description

Date:_____

Date: _____ Tooling:

Set Up/

Run Hours

SPC (Y/N):

Date:

Run

Accept

Qty

Start

Stop

Reject

Number

Stop

Reject

Qty

Insp.

Stamp

Sequence ID/ Work Center ID

120

Skidtubes Skidtubes

Memo

0.00

0.00

1- Deburr ends and remove marks bending marks

2- C'sink holes as per dwg without cutting fluid

3- Prepare tube for welding, remove alodine as required.

130

QC5- Inspect part completeness to step on W/O

0.00

Quality Control

Memo

0.00

Dart Ae	rospace Li	td								** **	
W/O:			W	ORK ORDER CHANC	GES				. 4	, ,	
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Work	Order	· ID	62840
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Friday, October 08, 2010 2:55:00 PM



Page 3

Item ID:

D205-634-041

Accept



Setup Start

Stop



Revision ID:

Item Name:

Replacement Skidtube

Start Date:

10/8/2010

Start Oty: 1.00 Req'd Qty: 1.00



Cust Item ID:

Customer:

Reference:

Aı	pprovals:
4.5	pp. 0 . m.s.

Required Date: 10/27/2010

QC:

Process Plan:

Operation

Description

Date:

Date:_____ **Tooling:**

SPC (Y/N):

Set Up/

Run Hours

Date:

Tool ID

Date:

Code

Stop

Reject

Qty

Start

Run

Accept

Qty



Number Stamp

Insp.

Reject

Sequence ID/ **Work Center ID**



Skidtubes Skidtubes

Memo

0.00

0.00

1-Weld step D2576 as per Dwg. D2580 and OSL004 A/R□□□ Aluminum Rod

BE 10/10/21 2-Prep per QSI 005 and weld crossbolt spacers D2579 as per Dwg, D2580, QSI

For D2579 spacers, weld one side, pass 3/8" drill, weld other side, pass 3/8"

A/R□□□ Aluminum Rod

3-Grind welds as per Dwg D2580 Grind flush ridge made from bending

4-Drill holes for wearplates using DT 8217 & DT8937 Open holes to 19/64", adjust stopper not to hit web.Deburr

5-Counterbore crossbolt spacers to 7/16" ID x 1.0" deep as per Dwg D2580. Deburr holes

6-Drill pilot holes for aft cap using DT 8215Open holes to 0.208". Deburr

7-Drill pilot holes for Tow ring using DT8091, open to .640" and Deburr

Tool # Plan

Dart Aerospace Ltd W/O: **WORK ORDER CHANGES** Approval. Approval QC Inspector DATE STEP PROCEDURE CHANGE By Qty Date Chief Eng / Prod Mgr Part No: ______ PAR #: ____ Fault Category: _____ NCR: Yes No DQA: ___ Date: ____ WORK ORDER NON-CONFORMANCE (NCR) NCR:

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Work Order ID 62840

Required Date: 10/27/2010

Friday, October 08, 2010 2:55:00 PM



Page 4

Item ID:

D205-634-041

Accept



Setup Start



Revision ID:

Item Name:

Replacement Skidtube

Start Date:

10/8/2010

Start Qty: 1.00

Req'd Qty: 1.00



Cust Item ID:

Customer:

Reference:

A	nn	ro	val	s:

Process Plan: _____ Date: ____

Tooling:

Date: Date: Run

Start

Stop

Stop

Sequence ID/

Date:_____

SPC (Y/N):

Tool ID

Tool # Plan

Code

Accept Qty

Reject Qty

Reject Insp. Number Stamp

Work Center ID

150

QC

Quality Control

Operation Description

QC10- Inspect visual per QSI004- ground welds

Set Up/ Run Hours

Memo

160

Quality Control

QC5- Inspect part completeness to step on W/O

170

HandFinish

Hand Finishing

Pressure Wash per QSI005 4.3

Memo

=> H 10/10/27

Memo

0.00

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch and leave fwd cap out of solution.

Dart Aerospace Ltd

W/O:			WORK ORDER CHANGES									
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Friday, October 08, 2010 2:55:00 PM



Page 5

Item ID:

D205-634-041

Accept



Setup Start

Stop



Revision ID:

Item Name:

Replacement Skidtube

Start Date:

10/8/2010

Start Qty: 1.00 **Required Date:** 10/27/2010

Req'd Qty: 1.00



Cust Item ID: Customer:

Reference:

Approvals:

QC:

Date:_____

Date: **Tooling:**

SPC (Y/N):

Date:

Date:

Tool # Plan

Code

Start Run

Stop

Sequence ID/ Work Center ID

180

Powdercoat

Powder Coating

Operation Description

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

Memo

START TIME: OVEN TEMPERATURI

FINISH TIME:

Set Up/ Run Hours

10-10-27.

Tool ID

Qty Qty

Reject

Reject Insp. Number Stamp

Accept

190

Quality Control

QC3- Inspect Part Finish

Memo

85/01/01 PMC= 0.00

0.00

0.00

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Work Order ID 62840

Friday, October 08, 2010 2:55:00 PM



Page 6

Item ID: D205-634-041 Accept Setup Start **Revision ID:** Stop Replacement Skidtube Item Name: **Start Date:** 10/8/2010 Start Qty: 1.00 **Cust Item ID: Required Date:** 10/27/2010 Req'd Qty: 1.00 **Customer:** Reference: Start Run Process Plan: Approvals: Date: Tooling: Date: Stop QC: SPC (Y/N): Date: Date: Sequence ID/ Operation Tool ID Set Up/ Tool # Plan Accept Reject Reject Insp. Work Center ID Description Qty Qty **Run Hours** Code Number Stamp 200 0.00 10/10/28 HandFinish 0.00 Memo Hand Finishing 1-Install inserts & wearplates & Gaskets as per Dwg. D2580. Use a drop of

Sikaflex on insert holes before installing wearplates A/R DDD Sikaflex-291 DAA 1151 DDD Sikaflex expire date: 11 31

2-Coat D2594-3 O' rings with Petroleum Jelly and install on D2594-1 plugs as per Dwg D2580

3-Inspect for foreign object per QSI 024

4-Install 2855 Aft Cap as per Dwg D2580 and seal Fwd Step & Aft Cap with

Sikaflex. Clean excess adhesive

Dart Aerospace Ltd

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Work Order ID 62840

Required Date: 10/27/2010

Friday, October 08, 2010 2:55:00 PM



Page 7

Item ID:

D205-634-041

Accept



Date:

Date:

Tool # Plan

Code

Setup Start

Stop



Revision ID:

Start Date:

Item Name:

10/8/2010

Start Qty: 1.00

Req'd Qty: 1.00



Cust Item ID: Customer:

Reference:

Approvals:

Replacement Skidtube

Process Plan:

Operation

Description

Date:

Date: Tooling:

SPC (Y/N):

Set Up/

Run Hours

Sial 11/02

Tool ID

Run

Stop

Sequence ID/ Work Center ID

210

Quality Control

Memo

Inspect Aft Cap, Fwd Step and Wing Walk of work to Current Step Inspect for

Foreign objects per OSI 024

QC5- Inspect part completeness to step on W/O

220

230

Packaging

Packaging

Packaging

Memo

0.00

0.00

Identify and pack for shipping as per PPPD205-634-041

Location:

PPP Rev:

QC21- Final Inspection - Work Order Release

0.00

Quality Control

Memo

0.00

Start

Reject

Qty

Reject

Number

Insp. Stamp

Accept

Qty

Dart Aerospace Ltd

W/O:			V	ORK ORDER CHANGE	S			a	4 4
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Picklist Print

Friday, October 08, 2010 2:55:04 PM

Work Order ID: 62840

Parent Item:

D205-634-041

Parent Item Name:

Replacement Skidtube



Start Date: 10/8/2010

Required Date: 10/27/2010

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP Rev:N□02.08.28□FP was QC5 in Step 27; Added QC5 to Step 30□KJ

IPP Rev P 10.02.19 per PAR09-043 EC verified by:DD

IPP Rev. O 06.02.28 Added paperwork

Item ID

Replacement Mfg/

Bin

No

No

Item Location

IPP Rev:P 07-07-09 SS Wearplates & Gaskets

Manufactured

Manufactured

Purch

Primary Last

Route Seq ID

110

Unit of Measure

Loc Oty

Each

Hand

Qty on

3.0000

Loc Code

Qty per Kit Total Qty

Qty Issued Date Issued

Status

D2580-1

D2576-3

Item Name

205 Skidtube bent detail

Component Item ID/

Location

LG

Location

62048

ST046

59856

52215

Each

48

68.0000

Step (maching detail)

Location Loc Qty Loc Code LG 68 46661 20

140

Page 1

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Start Qty : 1.00 Required Qty : 1.00								
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LG	D2579 Crossbolt Spacer	Manufactured	No		140 Each			
S7052 5 57348 4				Location	Loc Oty	Loc Code		
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D2855 Manufactured No 200 Each 61.000 1 1 1								_
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Friday, October 08, 2010 2:55.	:04 PM										
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Parent Item: D205-634-041						III					
Parent Item Name: Replacemen	nt Skidtube	!		! !! !!!! 				Start Date:	10/8/2010	Required Date: 10/27	7/2010
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Picklist Print Friday, October 08, 2010 2:55:04 PM								F	Page 4
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D3566-13 Gasket	Manufactured	No	<u>Location</u> ST245 107534	Loc Oty 29 29 A 200 Each	Loc Code N 115832 35.0000	1	<u>y</u> ≤8 1 9{(10/10/78	
D3566-5	Manufactured	No	Location FP012 59661 60209 61996	Loc Oty 35 1 8 26 200 Each	<u>Loc Code</u> 22.0000		1 1	16/10/28	
D3566-1	Manufactured	No	Location FP 60869 FP015 62463	Loc Oty 10 10 12 12 200 Each	Loc Code 23.0000	2			
Gasket			Location FP015 57715 60202 61992	Loc Oty 23 2 10 11	Loc Code B62		_ y Z		

Shop Packet Print

Friday, October 08, 2010 2:55:04 PM

Page 4

Dart Aerospace Ltd

W/O:			WC	ORK ORDER CHANC	GES				•	
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Friday, October 08, 2010 2:55:04 PM

Work Order ID: 62840

Parent Item:

D205-634-041

Parent Item Name: Replacement Skidtube



Start Date: 10/8/2010

Required Date: 10/27/2010

Start Qty: 1.00

Required Qty: 1.00

D3564-11

Wearshoe

D3564-13

Manufactured No 200

Each

14.0000

Loc Code

Manufactured No

Manufactured

Location Loc Oty FP019 14 60302 2 61708 12 200 Each

35.0000

10/10/28

Wearshoe		

Location	<u>Lo</u>	oc Oty	Loc Code
FP17	-	35	
59660		1	
60862		10	
61828		12	
62229		12	
No	200	Each	19.0000



Al 10/10/25

D3564-9

Wearshoe

Location		Loc Oty	Loc Code	
FP		1		
	55334	1		
FP019		18		
	60236	5		
	61709	13		χ (

Dart Aerospace

W/O:			WO	RK ORDER CHANGE	S	· <u>·</u>						
DATE	STEP	PRO	OCEDURE CHAN	IGE	Ву	Date	Qty	Approval ¹ Chief Eng /	Approval QC Inspector			
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Part No:P		PAR #:	Fault Categ	ory:	NCR: Yes	No DQ	A:	_ Date: _				
			Disposition	Disposition: QA: N				Closed: Date:				
NCR:			WORK ORDER NON-CONFORMANCE (NCR)									
DATE	0.750	Description of NC		Corrective Action Section B		Verifi	Verification	Approval	Approval			
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date		ion C	Chief Eng	QC Inspector			
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Picklist Print Friday, October 08, 2010 2:55:0	4 PM									Page 6
Work Order ID: 62840 Parent Item: D205-634-041 Parent Item Name: Replacement Skidtube							S	tart Date:	10/8/2010	Required Date: 10/27/2010
						Start Qty: 1.00			Required Qty: 1.00	
D3564-5 Wearshoe	Manufactured	No			200	Each	23.0000	1	1 _yl	10/10/28
			Location	<u>n</u>	Lo	e Oty	Loc Code			
			FG			1				
				34806		1				
			FP19			8				
				57525 58709		l 1				<u> </u>
				61699		6			VI	
			FP-19		•	14				
				60868		1				
				62237		13			_	
D2594-3	Manufactured	No		-	200	Each	931.0000		16	
O-Ring, 205 Skidtube									_JLL_	10/10/28
C,			Locatio	<u>on</u>	Lo	e Qty	Loc Code			
			FP			43				
				55546		19				
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Part No	•	PAR #:	Fault Cate	egory:	NCR: Yes	No DQA:	Date: _				
					QA: N/C Closed: Date:						
NCR:			WORK ORD	ER NON-CONFORM	IANCE (NCR						
DATE	STEP	Description of NC Corrective Action			ction B	Verification	Approval	Approval			
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Work Order ID: 62840

Parent Item:

D205-634-041

Parent Item Name: Replacement Skidtube



Start Date: 10/8/2010

Required Date: 10/27/2010

Page 7

Start Qty: 1.00

Required Qty: 1.00

D2594-1

Plug, 205 Skidtube

Manufactured

200

Each

267.0000

Il whole

Location	Loc Qty	Loc Code	
FP	183		
42807	112		
55002	71		
FP14	84	2000	
58434	15	1362893	_x 4
61932	69		<u> </u>

Dart Aerospace L	td	
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W/O:				WORK ORDER	CHANGES	1			
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Part No):		PAR #:	Fault Category:	NCR: Yes	No DG	A:	Date: _	
	Res	olution:		Disposition:	QA: N/C C	slosed:		Date: _	
				MORK ORDER NON-COM	ECRMANCE (NC	B)			

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
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DESIG	* Ht	DRAWN BY	DART AEROSPACE LTD, HAWKESBURY, ONTARIO, CANADA
CHECK	(ED_A/	APPROVED	DRAWING NO. REV. D
	THE STATE OF THE S	*	D2580 SHEET. 1 OF 3
DATE	_		TITLE SCALE
07.0	2.27		205 SKIDTUBE ASSEMBLY NTS
Α		96.09.16	NEW ISSUE
В		96.12.02	AS MANUFACTURED
С		98.08.26	REDRAWN, INCLUDED DEO 9094/9097
D		07.02.27	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/9183



QTY -041	QTY -045	Part Number	Description	
Х		D2580-041	SKIDTUBE ASSEMBLY	1
	X	D2580-045	SKIDTUBE ASSEMBLY]
				SHOP COPY
1	1	D2500-1-190	EXTRUSION	•
1	1	D2576-3	STEP	E.
20	24	D2579	CROSS BOLT SPACER	f "
16	16	D2594-1	PLUG INC	
16	16	D2594-3	O-RING	
1	1	D2596	205 WEB	[.
1	1	D2855	AFT CAP	· Class
1	1	D3564-5	WEARSHOE	172140_
1	1	D3564-9	WEARSHOE I	0.45-
1	1	D3564-11	WEARSHOE	0/1140-8
1	1	D3564-13	WEARSHOE	0.12-840- plio10-8
2	2	D3566-1	GASKET)
1	1	D3566-5	GASKET	
1	1	D3566-13	GASKET	
50	50	ALS7-1032-130	INSERT	
		or AKS7-1032-130		
		or AKS4-1032-130		
		or AELS-1032-130	<u></u>	ł I
50	50	AN3C4A	BOLT	
2	2	AN3-5A	BOLT	
50	50	AN960C10L	WASHER	
2	2	AN960JD10L	WASHER	

GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) ALL DIMENSIONS ARE IN INCHES
- INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 4) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- USE DART DRILL TEMPLATE TD2577-205 TO LOCATE AND DRILL Ø0,297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION D-D (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND AN960C10L WASHERS WITH SIKAFLEX-241/-
- 6) WELDING TO BE DONE PER DART QSI 004.
- 7) FINISH:

SEE NOTES ON

PAGE 2 FOR D2580-041 AND

PAGE 3 FOR D2580-045

INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES).

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES							
DATE	STEP PROCEDURE CHANGE		OCEDURE CHANGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	
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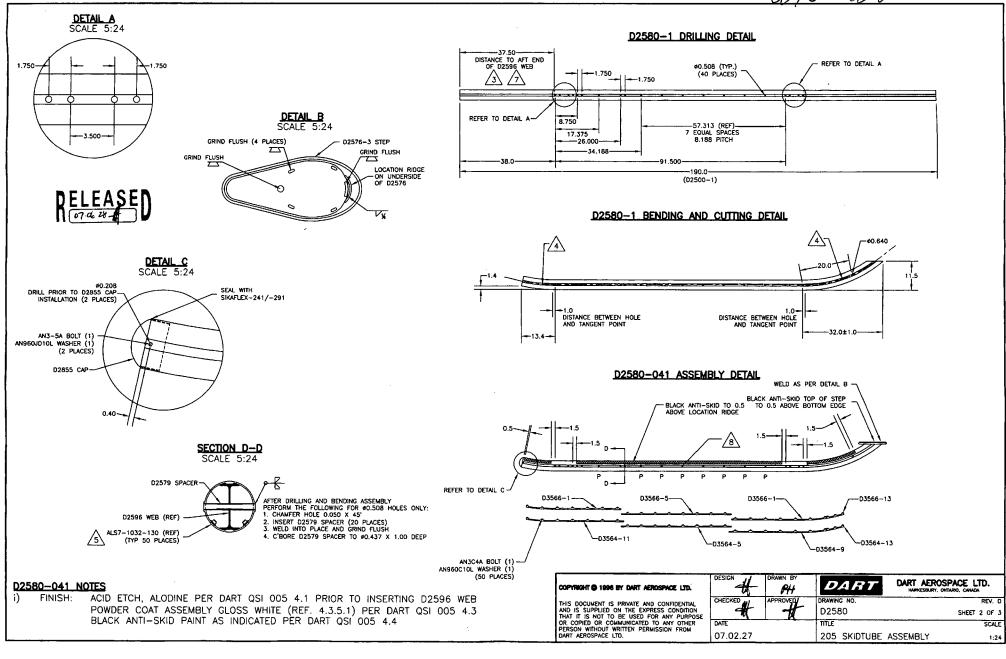
Disposition: _____ QA: N/C Closed: ____ Date: ___

NCR:		1	WORK ORDER NON-CONFORMANCE (NCR)							
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NOTE: Date & initial all entries

Resolution: ____

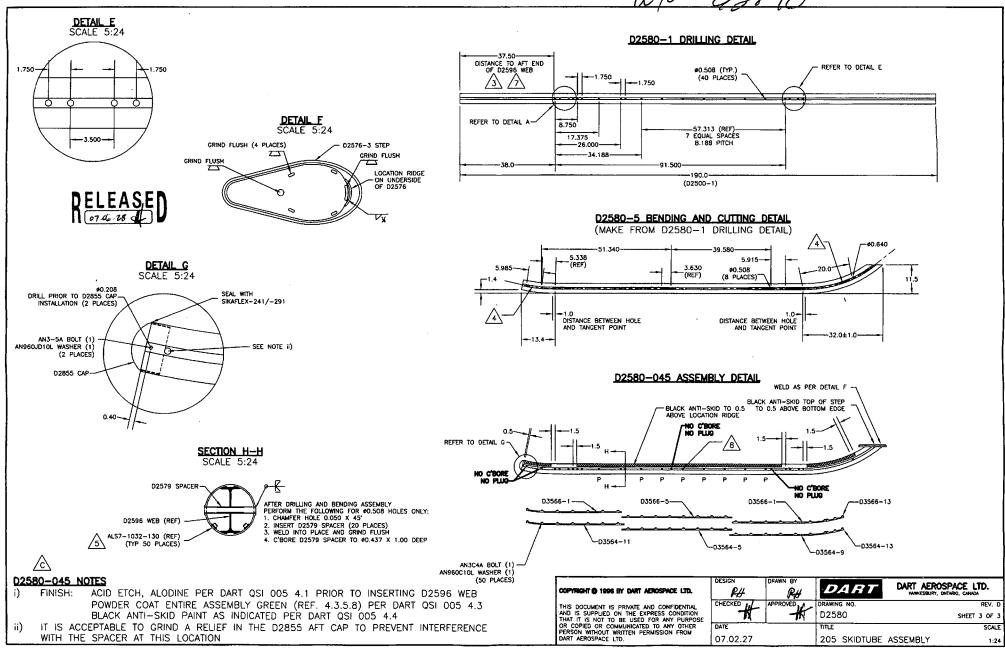
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W/O:		WORK ORDER CHANGES							
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	WORK ORDER CHANGES					* * * * *		
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	STEP					STEP PROCEDURE CHANGE By Date Qty Chief Eng /		

Part No:	PAR #:	Fault Category:	NCR: Yes No DQA:	Date:
	Resolution:	Disposition:	QA: N/C Closed:	Date:

NCR:		WORK ORDER NON-CONFORMANCE (NCR)								
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			Initial Chief Eng	Action Description Chief Eng-	Sign & Date	Section C	Approval Chief Eng	Approval QC Inspector		
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NO. 240_	

AWS D17.1.2001 QUALIFICATION TEST RECORD

	-
Name: Barday Elliott	
Job number: 62176 8	
Part number: <u>D205</u> . 634.041	
Description: 205 skid tube	
Welding Process: Tig[/ Mig[]	
Base materiel: Aluminian	
Current: AC[] DC[]	

TEST REQUIREMENTS AND RESULTS

pass[] fail[] pass[] fail[]
pass[] fail[] pass[] fail[] pass[] fail[] pass[] fail[] pass[] fail[] pass[] fail[]
Date of Test Coupon 10.09.30 Date of Test Coupon 10.09.30

The above named individual is qualified in accordance with AWS D17.1.2001 to weld